

Attorney Docket No. 0025-013

Application No. 10/784,102

IN THE SPECIFICATION

Please amend the Specification as follows:

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Paragraph beginning at Page 6, Line 2:

5 Fig. 2 is a diagrammatic top plan view of the integrated camera module 10 of Fig. 1 before the lens assembly 24 is positioned thereon. As can be seen in the view of Fig. 2, placement of the lens assembly 24 (Fig. 1) in an X ~~dimension 36~~ dimension 34 and a Y ~~dimension 38~~ dimension 36 is accomplished by the position and tolerances of the recessed area 29 in the molding 26. An aperture 38 in the molding 26 is provided such that the sensor array area 14 can
10 be seen there through.

Paragraph beginning at Page 7, Line 1:

Fig. 6 is a top plan diagrammatic view of a substrate strip 52. The substrate strip 52 has a plurality (100 in the example shown) of the individual PCBs 16a included therein. The substrate
15 ~~strip 54~~ strip 52 also has a plurality (18 in this example) of alignment holes 54 for aligning the substrate strip 52 in one or more placement jigs (not shown).

Paragraph beginning at Page 8, Line 7:

Fig. 11 is a flow diagram depicting an example of the present inventive camera module construction method 100. In this particular example, a plurality of camera modules are
20 constructed at the same time. First, in a "camera chip mounting" operation 102, one or more camera chips 12 are mounted to one or more PCBs 16a, respectively (Fig. 6). Next, in a "lens mount overmolding" operation 103, a lens mount 26 is molded over each camera chip 12. Then, in a "device separation" operation operation 104, the PCBs 16a are separated (e.g., sawn apart)
25 from one another. Next, in a "lens mounting" operation 105, a lens housing 62 is mounted into each lens mount molding 26 (Fig. 10). Finally, in a "packaging" operation 106, the completed integrated camera modules 10a are packaged for shipment to the makers of miniature cameras, telephone cameras, and the like, or optionally for attachment to the flex circuit 44 as previously discussed herein.

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Paragraph beginning at Page 8, Line 18:

Fig. 12 is a flow chart summarizing one particular method 107 for performing camera chip mounting operation 102 of method 100. First, in a "protective cover position" operation 108, protective cover 33 is positioned over camera chip 12 (Fig. 10). Optionally, protective cover 33 can be positioned during lens mount overmolding operation 103, at another point in camera chip mounting operation 102, or omitted. Next, in a "solder paste print" operation 110 solder paste traces are printed on the individual PCBs 16a of the substrate strip 52. In a "passive attach" operation 112 the passive components 18 are placed on the PCBs 16a. In a "reflow" operation 114, the substrate strip 52 is subjected to a reflow soldering operation, and in a "cleaner" operation 116, the substrate strip 52 is subjected to conventional cleaning following the reflow soldering process 114.

Paragraph beginning at Page 9, Line 3:

Fig. 13 is a flow chart summarizing one particular method 127 of performing lens mount overmolding operation 103 of method 100. In a protective cover positioning operation 128, protective cover 33 is positioned over camera chip 12. Note that this step is unnecessary if protective cover 33 has already been mounted as part of a prior process, or if no protective cover is desired. Then, in an "over molding" operation 129, the mold chase 56 is placed over the substrate strip 52 and the ~~molding-16~~ molding 26 is formed as previously discussed herein. In addition to the functionality already described herein, ~~molding-16~~ molding 26 can also serve to hold protective covering 33 in place, essentially sealing in the sensor array area 14 of camera chip 12. The molding 26 is formed using generally conventional "overmolding" techniques known to those skilled in the art. The mold will provide for exposure of the sensor array area 14 of the camera chip 12 after the molding operation. Finally, in an "O/M curing" operation 130, the molding 26 is briefly heat cured.

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Paragraph beginning at Page 10, Line 16:

While the inventors presently believe that mounting the lens assemblies ~~22, 22a~~ assemblies 24, 24a into the molding 26, or the like, by an adhesive is presently the most viable method, it is within the scope of the invention that the lens assemblies 22, 22a could be secured to the PCB 16, 16a in relation to the camera chip 12 by other mechanical means, such as a mechanical clip, or the like.